RRB ALP Electronics Mechanic 23 Jan 2019 Official Paper (Shift 1) (Previous Year Paper)

RRB Assistant Loco Pilot (ALP) • 2019 • 175 questions • 150 minutes • Answer key

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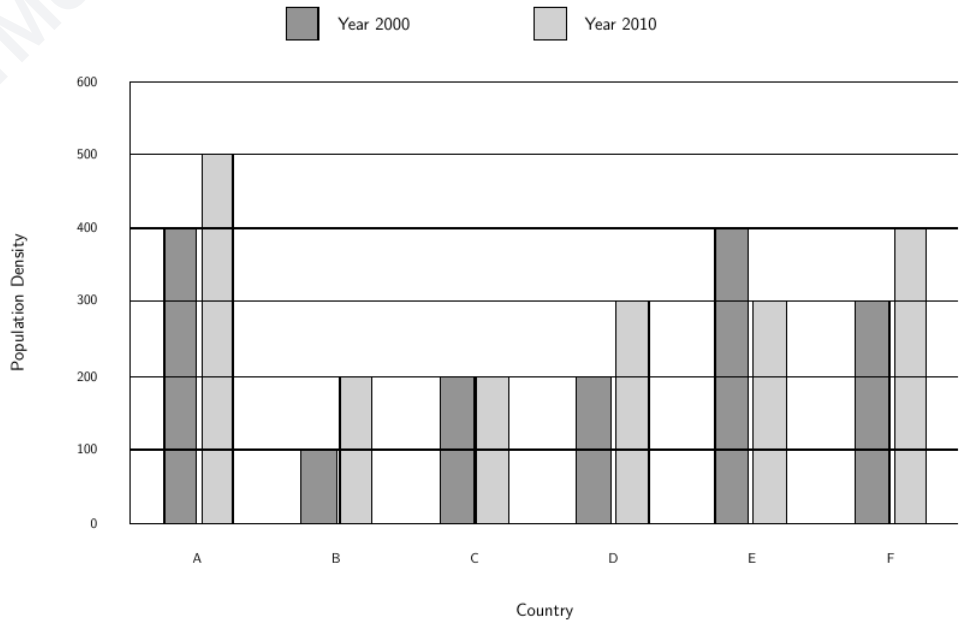
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PART A

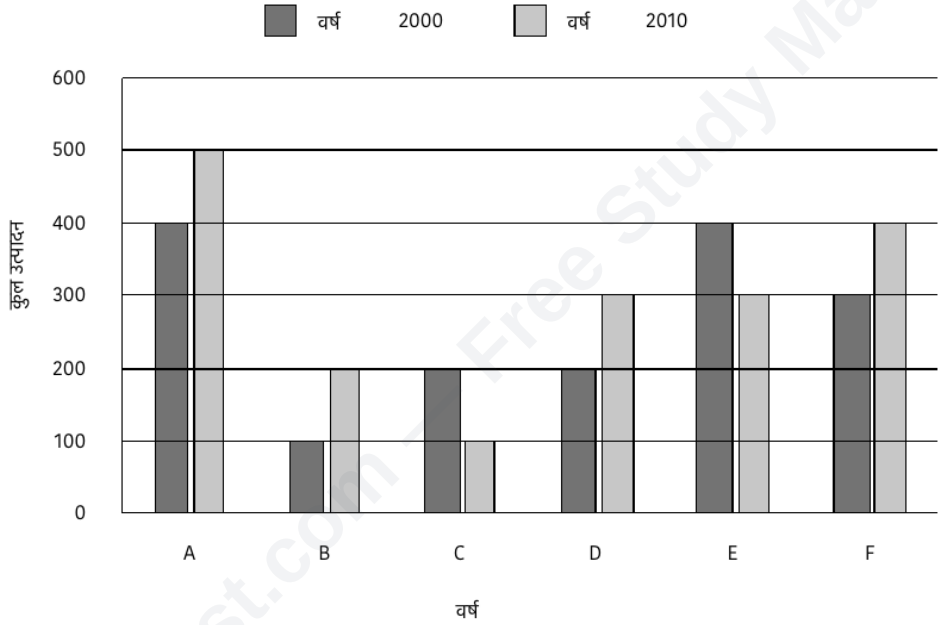
Q1. What is the diameter (in cm) of a sphere of surface area 1386 cm²?

(a) 14
(b) 21
(c) 10.5
(d) 24.5

Directions



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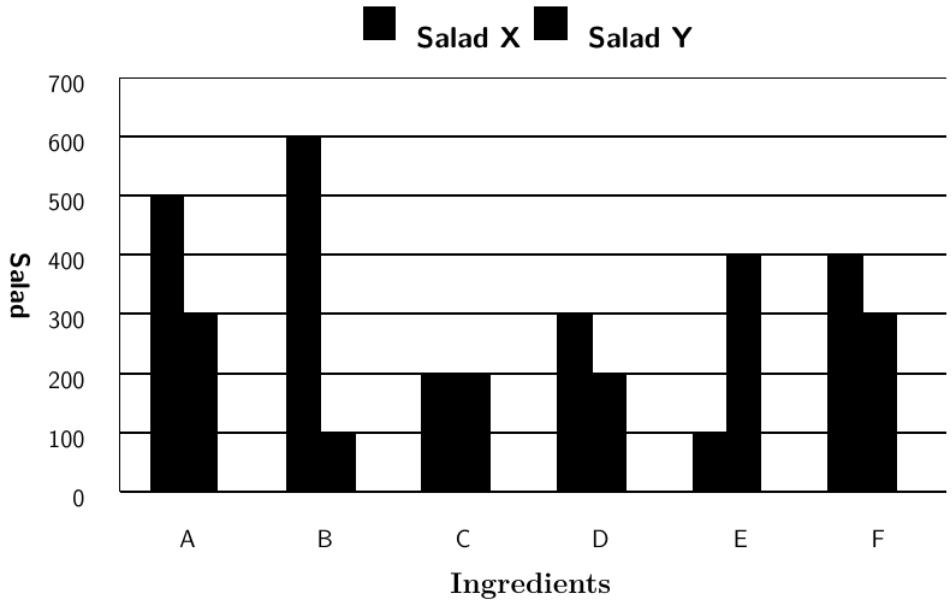


Q2. The bar graph shows the population density of 6 countries in 2000 and 2010.

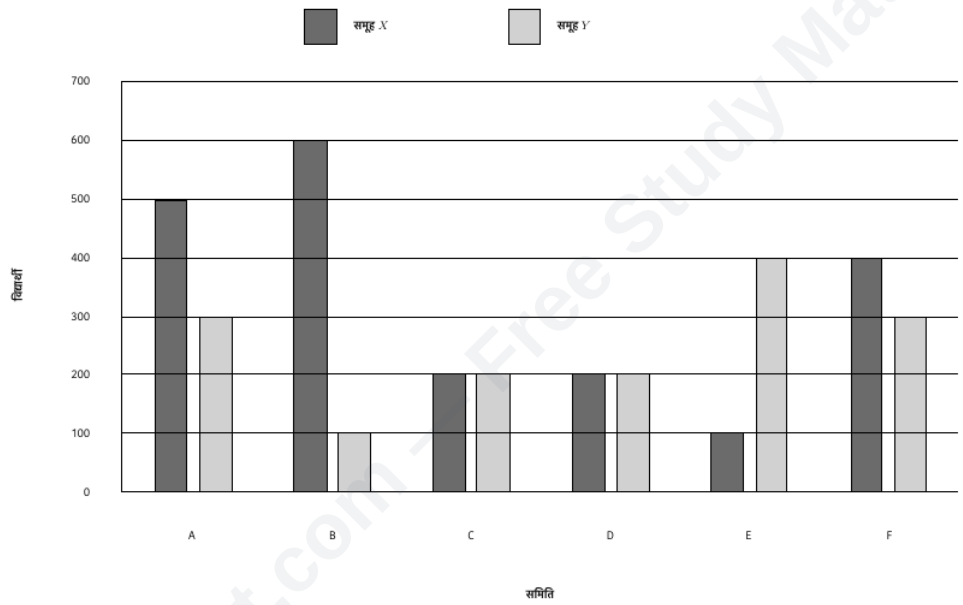
If the population of country B is 10 million in 2000 and the population of country D is 6 million in 2010, how much more is the area of country B than the area of country D, where population density is measured as the number of people per 100 square kilometers.

(a) 500%
(b) 20%
(c) 400%
(d) 25%

Directions



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Q3. The bar graph shows all the ingredients (in grams) required to make two types of salads, X and Y. If Ingredient B of Salad X is reduced by 100 grams and Ingredient E of salad Y is increased by 25% then salad Y would be lighter than salad X by _____.

(a) 37.50%
(b) 25%
(c) 20%
(d) 22.50%

Q4. In a steady-flowing river, a boat goes a certain distance upstream at a speed of 12 km/h and comes back the same distance at 24 km/h. Find the average speed for the total journey.

(a) 15 km/h
(b) 16 km/h
(c) 18 km/h
(d) 20 km/h

Q5. Find mass of an iron cube of side 2 cm. (Density of iron is 7.8 gm/cm^3)

(a) 3.9 gm
(b) 0.975 gm
(c) 15.6 gm
(d) 62.4 gm

Q6. Two cars, X and Y, travel from A to B at average speeds of 50 km/hr and 75 km/hr respectively. If X takes 2 hours more than Y for the journey, then the distance between A and B in km is _____.

(a) 600
(b) 400
(c) 800
(d) 300

Q7. If a shopkeeper sells an item at Rs. 2,700, he makes 8% profit. If he sells the item at Rs. 3,000 what will be the percentage of profit?

(a) 12
(b) 20
(c) 10
(d) 25

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Q8. Find the highest common factor of 506 and 782.

(a) 29
(b) 34
(c) 46
(d) 22

Q9. A alone can do a task in 35 days and B alone in 14 days. If they work on it together for 5 days, then what fraction of the task is left?

(a) Quarter
(b) One-thirds
(c) Half
(d) Three fourths

Q10. $(0.1^2 - 0.025^2) \div (0.1 - 0.025) =$ _____.

(a) 0.325
(b) 0.125
(c) 0.625
(d) 0.25

Q11. Find the coordinates of the midpoint of the segment joining the points (-4, 7) and (2, 3).

(a) (-1, 5)
(b) (-2, 3)
(c) (1, -5)
(d) (2, 4)

Q12. 20 - 2[25% of (15 × 8 ÷ 6 + 12)] = _____

(a) 4
(b) 6
(c) 10
(d) 8

Q13. If a - b = 5 and ab = 14, then find $a^2 + b^2$.

(a) 53
(b) 27
(c) 5
(d) 19

Q14. Find the value of 5 sin θ - 2 cosec θ, if θ = 30°.

(a) 3/2
(b) • 3/2
(c) 2/3
(d) • 2/3

Q15. In a certain gear train, the driver has 18 teeth while the follower has 8 teeth. For every 16 turns of the driver, the follower turns _____ times.

(a) 18
(b) 8
(c) 36
(d) 9

Q16. If 5x/2 - 1/4(6x - 5/3) = 7/6, then the value of x is _____.

(a) 5/4
(b) 3/4
(c) 3/7
(d) 5/7

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Q17. If the amount received at the end of 1^(st) and 2^(nd) year at compound interest on a certain principal is Rs. 1,350 and Rs. 1,458 respectively, what is the rate of interest?

(a) 10%
(b) 15%
(c) 12%
(d) 8%

Q18. A trader buys 60 bags of grain at Rs. 400 each. If he sells 18 bags at 8% profit, at what price should he sell the remaining bags to make 16.4% overall profit on selling the 60 bags?

(a) Rs. 480
(b) Rs. 500
(c) Rs. 540
(d) Rs. 520

Q19. If A, B and C can do a task working alone in 12, 18 and 36 days respectively. They all work together for 2 days, then B quits. How many days A and C working together will take to complete the remainder of the task?

(a) 6
(b) 3
(c) 4
(d) 9

Q20. What is the area (in cm^2) of an equilateral triangle of side 8 cm?

(a) $32\sqrt{3}$
(b) $8\sqrt{3}$
(c) $64\sqrt{3}$
(d) $16\sqrt{3}$

Q21. A and B start to walk from point P towards point Q. The distance between P and Q is 9 km. B starts 4 minutes after A. A, on reaching Q, immediately returns and after walking a kilometre meets B. If A's speed is a kilometre in 10 minutes, what is B's speed in kilometres per minute?

(a) 1/15
(b) 1/8
(c) 1/12
(d) 1/6

Q22. Pipe A can fill a tank in 6 hours. Pipe B can empty it in 15 hours. If both the pipes are opened together, then the tank will be filled in how many hours?

(a) 9
(b) 8
(c) 12
(d) 10

Q23. When a number is increased by 36, it becomes 109% of itself. What is the number?

(a) 300
(b) 450
(c) 360
(d) 400

Q24. A bullet travels 90 m in 0.2 seconds. Find its speed in km/hr.

(a) 162
(b) 1,620
(c) 1,250
(d) 125

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Q25. An executive earns a salary of Rs. 12,600 every month, and he spends 5/7 of it. If his salary increases by 1/3^(rd) and his spending increases by 1/5^(th) of the present expenditure, what fraction of his salary will he save?

(a) 7/16
(b) 8/15
(c) 7/15
(d) 5/14

Q26. If 3A = 6B = 7C; find A : B : C.

(a) 12 : 7 : 3
(b) 7 : 12 : 6
(c) 14 : 7 : 6
(d) 7 : 3 : 12

Q27. Find x if the mean of the numbers 10, 4, 1, 15, 15, x, 12 and 14 is 10.

(a) 7
(b) 8
(c) 9
(d) 10

Q28. If √X + 0.24 = √0.1296 then find X.

(a) 0.0144
(b) 0.12
(c) 1.44
(d) 0.0012

Q29. The weights of 3 boxes are 4, 7 and 10 kilograms. Which of the following CANNOT be the total weight, in kilograms, of any combination of these boxes?

(a) 14
(b) 21
(c) 17
(d) 18

Q30. The author of 'The Monk Who Sold His Ferrari' is _____.

(a) Arvind Adiga
(b) Robin Sharma
(c) Manohar Malgonkar
(d) Arundhati Roy

Q31. Find the work done (in kJ) if a force of 750 N pushes a cart of mass 30 kg by 16 m.

(a) 24
(b) 12
(c) 36
(d) 48

Q32. Which hazardous substance can cause lung cancer?

(a) Benzene vapours
(b) Asbestos particles
(c) Herbicides
(d) Aluminum

Q33. _____ is the physiological adjustment by an organism to environmental change.

(a) Bioremediation
(b) Bioaccumulation
(c) Cogeneration
(d) Acclimation

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Q34. Which of the following gases is a highly poisonous, odourless, tasteless and colourless gas?

(a) Carbon dioxide
(b) Carbon monoxide
(c) Methane
(d) Nitrogen dioxide

Q35. Green and yellow vegetables in our diet mostly provide us which element as food?

(a) Copper
(b) Sodium
(c) Zinc
(d) Potassium

Q36. Binary 110110101 is equal to decimal _____.

(a) 333
(b) 437
(c) 349
(d) 477

Q37. A/An _____ is software used to maintain the security of a private network.

(a) malware
(b) encryption
(c) firewall
(d) clickbait

Q38. Who was the chairman of the Constitution Drafting Committee?

(a) Jawaharlal Nehru
(b) Dr. B R Ambedkar
(c) Dr. Rajendra Prasad
(d) Sardar Patel

Q39. The Umaid Bhawan Palace is in which city?

(a) Jaipur
(b) Jodhpur
(c) Bikaner
(d) Udaipur

Q40. Classical musician Shivkumar Sharma is associated with which musical instrument?

(a) Shehnai
(b) Tabla
(c) Violin
(d) Santoor

Q41. Which of the following folk dances is from Assam?

(a) Giddha
(b) Lezim
(c) Nati
(d) Bagurumba

Q42. -100° Celsius = _____ Fahrenheit

(a) -373°
(b) -148°
(c) 173°
(d) -212°

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Q43. If 36 J of work is done in moving a charge Q across 8 V, find Q (in coulombs).

(a) 288
(b) 9
(c) 4.5
(d) 16

Q44. What is the relative density of a solid of mass 50 gm which when fully immersed in water weighs 10 gm?

(a) 5
(b) 1.25
(c) 2.5
(d) 0.8

Q45. If the speed of a car increases from 54 km/hr to 90 km/hr, its kinetic energy increases in the ratio of _____.

(a) 3/5
(b) 9/4
(c) 9/16
(d) 9/25

Q46. Find the length (in cm) of the edge of a cube of a piece of wood which weighs 80 N. (Use g = 10 m/s^2, density of wood = 1 g/cm^3)

(a) 60
(b) 20
(c) 80
(d) 40

Q47. Two resistors of R Ω and 60 Ω are connected in parallel to get an effective resistance of 24 Ω. Find R.

(a) 56
(b) 64
(c) 48
(d) 40

Q48. Farad per meter is the unit of _____.

(a) watt per steradian
(b) permittivity
(c) permeability
(d) electric conductance

Q49. A _____ map converts color intensity or grayscale information to heights to give the appearance that features are raised above the surface, like embossed letters.

(a) shade
(b) bump
(c) tone
(d) tint

Q50. A truck of mass 5000 kg accelerates from 25 m/s to 35 m/s. Find the change in its kinetic energy (in MJ).

(a) 1
(b) 2.5
(c) 1.5
(d) 2

Q51. Which of the following recipients of the Dadasaheb Phalke Award received it posthumously?

(a) Vinod Khanna
(b) Satyajit Ray
(c) Naushad
(d) Durga Khote

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Q52. To _____ is to prepare a storage medium, usually a disk, for reading and writing.

(a) format
(b) defrag
(c) map
(d) boot

Q53. Which of the following is the correct relation between resistance ‘R’, conductivity ‘σ’, length ‘L’ and area of cross section ‘A’ of a metal wire?

(a) RL = Aσ
(b) RσA = L
(c) RA = Lσ
(d) σ = RL/A

Q54. Which team won the Indian Premier League (IPL) in 2018?

(a) Sunrisers Hyderabad
(b) Chennai Super Kings
(c) Royal Challengers Bangalore
(d) Kolkata Knight Riders

Q55. Antihistamines are found in some first-aid boxes. When should these drugs be taken?

(a) To aid in clotting of blood
(b) To ease the symptoms of hay fever and other allergies
(c) To ease the indigestion and heartburn
(d) To bring relief from asthma

Q56. Acceleration due to gravity on moon is 1/6^(th) that on earth. How much would an astronaut weigh on the moon if he weighs 90 kgf on earth? (acceleration due to gravity on earth = 10 m/s²)

(a) 15 N
(b) 150 N
(c) 90 N
(d) 9 N

Q57. Which of the following is NOT a base unit?

(a) mole
(b) ampere
(c) radian
(d) candela

Q58. Who invented the blue jeans?

(a) Levi Strauss
(b) Todd Oldham
(c) Calvin Klein
(d) Gianni Versace

Q59. Find the potential difference (in V) across a resistance of 2.5 kΩ through which a 2 mA current flows.

(a) 5
(b) 0.2
(c) 1.25
(d) 0.8

Q60. The Living Planet Report, released every two years, is the flagship publication of which organisation?

(a) The Nature Conservancy
(b) World Wide Fund for Nature
(c) Conservation International
(d) Wildlife Conservation Society

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Q61. The sum of two binary numbers 1101111 and 1100101 is _____.

(a) 100011100
(b) 100000110
(c) 11110000
(d) 11010100

Q62. The National Skills Development Corporation (NSDC) is a public-private partnership formed under India's _____.

(a) Ministry of Finance
(b) Ministry of Electronics & Information Technology
(c) Ministry of Corporate Affairs
(d) Ministry of Science & Technology

Q63. The resistance of a metal rod depends on all of the following, except _____.

(a) resistivity
(b) density
(c) length
(d) temperature

Q64. Find the missing number in the given series.

-1.3, -0.8, -0.3, ?, 0.7, 1.2

(a) 0.1
(b) 0.3
(c) 0.4
(d) 0.2

Q65. One statement is given, followed by two assumptions, I & II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You are to decide which of the given assumptions can definitely be drawn from the given statement.

Statement: "You are appointed as a trainee accountant on temporary basis. Your employment status will automatically be converted to permanent on submission of pass result of M Com final exam." — Extract from an appointment letter.

Assumptions:

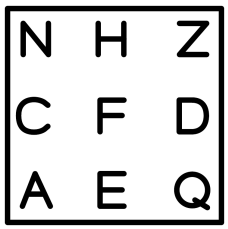
I. M Com final exam is a reasonable proof of an accountant's capability.

II. All trainees are appointed on temporary basis.

(a) Both I and II are implicit
(b) Only assumption I is implicit
(c) Only assumption II is implicit
(d) Neither I nor II is implicit

Q66. Choose the figure which is different from the rest.

(a)



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(b)

Z	C	H
F	A	N
O	D	E

(c)

H	D	N
F	O	Z
C	E	A

(d)

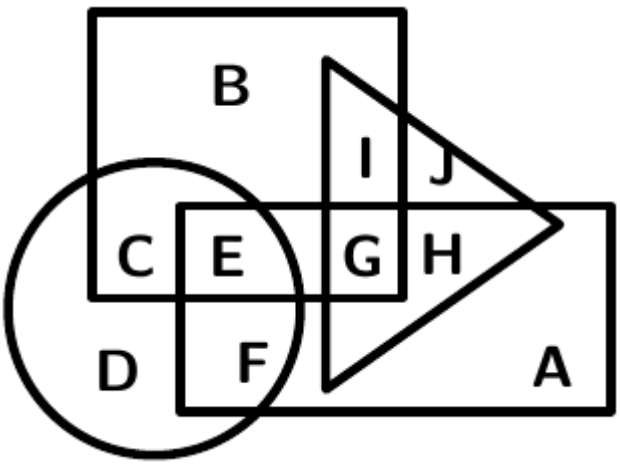
A	C	Q
Z	+ D =	E
N	F	H

Q67. In a certain code language, '+' represents '×', '÷' represents '+', '-' represents '÷' and '×' represents '-'. Find out the answer to the following question.

12 ÷ 6 – 2 + 10 × 5 = ?

(a) 50
(b) 37
(c) 23
(d) 16

Q68. In the following figure, the triangle represents actors, the square represents professors, the circle represents Indians and the rectangle represents fathers. Which set of letters represents Indians who are either professors or fathers?



(a) IGH
(b) CEF
(c) E
(d) G

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Q69. Choose the letters which are different from the rest.

(a) HJL
(b) PRT
(c) VTR
(d) UWY

Q70. Select the option that is related to the third word on the same basis as the second word is related to the first word.

Letter : Envelope ? Dagger : ?

(a) Sheath
(b) Weapon
(c) Sword
(d) Sharp

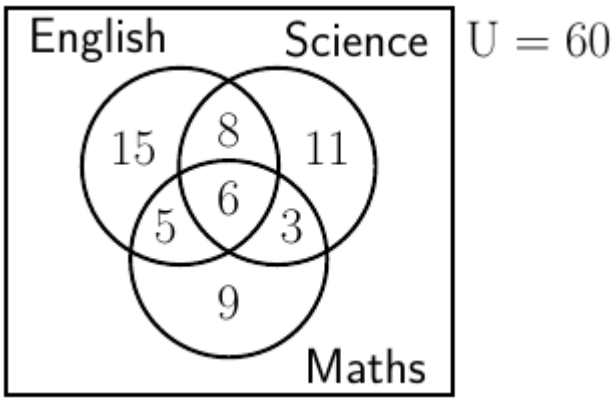
Q71. If A $ B means A is the husband of B, A # B means A is the brother of B and A * B means A is the mother of B, then what does P $ Q * R # S mean?

(a) P is the father of S
(b) P is the brother-in-law of S
(c) P is the son of S
(d) P is the brother of S

Q72. What is the angle between the hour hand and the minute hand at half past two?

(a) 105°
(b) 75°
(c) 120°
(d) 90°

Q73. The given Venn diagram shows the number of students who have passed in the three exams, viz. English, Science and Maths. How many students failed in all the three exams?



(a) 3
(b) 12
(c) 9
(d) 6

Q74. One statement is given followed by two conclusions. Decide which of the given conclusions can definitely be drawn from the given statement.

Statement: As income increases, cars become more affordable.

Conclusion I: With greater use of technology, cars are now cheaper than they were a generation ago.

Conclusion II: Cars will become so numerous that no future technology will solve the traffic problem.

(a) Only conclusion I follows
(b) Both I and II follow
(c) Neither I nor II follows
(d) Only conclusion II follows

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Q75. A postman starts from the post office and cycles 13 km south, then turns west and cycles 10 km, then turns north and cycles 8 km, then turns east and cycles 2 km and then turns to his left and cycles 5 km. Where is he now with reference to his starting position?

(a) 8 km east
(b) 12 km east
(c) 12 km west
(d) 8 km west

Q76. Here are some words from an artificial language.

unacri means lighthouse

bancri means lightweight

banetu means overweight

Which word would mean 'overdrive'?

(a) adiban
(b) adietu
(c) simuna
(d) criteh

Q77. At present, the ratio between the ages of Anu and Dimpy is 5 : 8. After 2 years, the ratio of their ages will become 2 : 3. What was Dimpy's age before 2 years?

(a) 10
(b) 12
(c) 16
(d) 14

Q78. In the question, two statements are given, followed by three conclusions, I, II and III. You have to consider the statements to be true even if they seem to be at variance with commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement:

All flags are banners.

Some flags are emblems.

Conclusion:

I. Some emblems are banners.

II. All banners are emblems.

III.No emblems are banners.

(a) Only conclusion I follows
(b) Only conclusion III follows
(c) All conclusions I, II and III follow
(d) Only conclusion I and III follow

Q79. Choose the one which is different from the rest.

(a) Father
(b) Son
(c) Mother-in-law
(d) Brother

Q80. Select the option that is related to the third word on the same basis as the second word is related to the first word.

Poem : Stanza ? Book : ?

(a) Language
(b) Story
(c) Page
(d) Printing

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Q81. If 8 # 12 = 10; 5 # 9 = 7; 6 # 10 = 8, then find the value of 14 # 4.

(a) 10
(b) 9
(c) 5
(d) 3

Q82. In a certain code DIRTY is coded as 24759 and FOAM is coded as 1863. Using the same code ARID will be coded as _____.

(a) 2489
(b) 9165
(c) 1579
(d) 6742

Q83. In the following question, which set of letters and numbers, when sequentially placed at the gaps in the given series, shall complete it?

1_2x_bb_yy_cc_6zzz

(a) a345c
(b) 3a45b
(c) 3a4b5
(d) 3a45c

Q84. A said to B, “You are my husband’s daughter-in-law’s son.” How is B related to A?

(a) B is the father of A
(b) B is the grandson of A
(c) B is the brother of A
(d) B is the son of A

Q85. In the question, two statements are given, followed by two conclusions, I, and II. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement 1: Some wagons are buggies.

Statement 2: All wagons are carts.

Conclusion I: All buggies are carts.

Conclusion II: Some carts are buggies.

(a) Only conclusion I follows
(b) Both I and II follow
(c) Neither I nor II follows
(d) Only conclusion II follows

Q86. Rearrange the parts of the sentence in the correct order.

A customer based on reasons

X- chances are that they actually made the change

Y- may not come out of the changing room, but

Z- which is unfortunately inappropriate

(a) YXZ
(b) ZYX
(c) XZY
(d) ZXY

Q87. Find the power (in W) of a pump if it can lift 1 tonne of water by 90 m in 30 minutes. (Assume 100% efficiency and use g= 10 m/s²)

(a) 50
(b) 250
(c) 25

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(d) 500

Q88. Which of the following is an example of a first class lever?

(a) Ice tongs
(b) Wheel barrow
(c) A pair of scissors
(d) Nut cracker

Q89. _____ curves employ at least three points to define a curve. The two endpoints of the curve are called anchor points. The other points, which define the shape of the curve, are called handles, tangent points, or nodes.

(a) Bicorn
(b) Bezier
(c) Deltoid
(d) Kappa

Q90. Find the efficiency of a pulley system which has a mechanical advantage of 2.5 and where the load lifts by 2.5 meters on pulling the rope by 10 m.

(a) 62.50%
(b) 25.00%
(c) 40.00%
(d) 100.00%

Q91. _____ is when we cover a surface with a pattern of flat shapes so that there are no overlaps or gaps.

(a) Tessellation
(b) Tracking
(c) Gradient
(d) Kerning

Q92. If half a litre of hot water at 90°C is mixed with three and a half litres of cold water at 10° C, find the final equilibrium temperature (in °C) if no heat is lost.

(a) 20
(b) 40
(c) 30
(d) 50

Q93. Two children, weighing 30 kg and 15 kg, sit on one side of a see-saw at a distance of 1 m and 1.2 m respectively, from the fulcrum. A boy of 'M' kg sits on the other side of the see-saw at a distance of 1.2 m from the fulcrum, and the see- saw is in equilibrium. Find M.

(a) 36
(b) 45
(c) 48
(d) 40

Q94. Find the heat capacity of a pan of mass 200 g, if its temperature rises by 8° C on receiving 2000 J of heat.

(a) 250 JK^(-1)
(b) 5 JK^(-1)
(c) 50 Jkg^(-1)K^(-1)
(d) 1.25 Jkg^(-1)K^(-1)

Q95. 210 mm × 297 mm are the dimensions of _____ size paper.

(a) A4
(b) A2
(c) A3
(d) A1

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Q96. The sentences given in the question, which, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

Outside their window there was a vine with attractive foliage, but it started shedding leaves one by one as summer passed through fall into winter.

A - Came dawn, when Johnsy looked out of the window from her sick bed, lo and behold, the leaf was still there and it continued to be there on the following days.

B - Finally, only one last leaf remained. Johnsy told Sue that when that leaf fell, her life would also go.

C - The girl regained her will to live and was fully recovered in a few days.

D - A concerned elderly artist friend of the girls, hearing this story, climbed outside the window in the bitterly cold night and painted a life-like leaf at the spot from where the last leaf had just fallen.

(a) BDCA
(b) BDAC
(c) DBCA
(d) DBAC

Q97. An object with greater _____ has greater inertia.

(a) velocity
(b) acceleration
(c) volume
(d) mass

Q98. Find the specific heat capacity (in Jg^(-1)K^(-1)) of a block of metal of mass 500 g, the temperature of which rises by 80°C when it absorbs 10 kJ of heat?

(a) 0.4
(b) 0.16
(c) 1.56
(d) 0.25

Q99. Find the specific latent heat of vaporisation of 1.25 g of nitrogen (in Jg^(-1)), if it releases 250 Joules of heat when it condenses at its boiling point of 196° C.

(a) 469
(b) 500
(c) 312.5
(d) 200

Q100. An arrowhead at the end of a dimension line is approximately _____ long and 1 mm wide.

(a) 3 mm
(b) 5 mm
(c) 1 mm
(d) 1.5 mm

PART B

Q101. A unijunction transistor (UJT) is used to _____

(a) boost the SCR
(b) amplify DC
(c) boost and trigger TRIAC
(d) trigger the SCR

Q102. Secondary cells _____

(a) can be recharged and reused
(b) can be charged but cannot be reused
(c) cannot be recharged

(d) cannot be charged and reused

Q103. An Inductive Reactance function:

(a) opposes alternating current
(b) opposes direct current
(c) allows alternating current
(d) allows alternating current and direct current.

Q104. If a diode shows equal resistance but not zero in both directions then the diode must be ____.

(a) short
(b) defective
(c) working fine
(d) open

Q105. A Hartley oscillator is commonly used in ____.

(a) Radio Receivers
(b) Radio Transmitters
(c) TV Receivers
(d) TV Transmitters

Q106. Which of the following is a concept in mobile communication?

(a) Triplexing
(b) Duplexing.
(c) Simplexing
(d) Quadraplexing

Q107. Solar cells work on the principle of ___.

(a) Isolation and Opto coupling
(b) Isolation
(c) Photo Voltaic
(d) Opto Coupling.

Q108. Transistor in saturation region works as _____.

(a) Switch
(b) Attenuator
(c) Oscillator
(d) Amplifier

Q109. Which of the following computer hardware is used to display feedback of our actions?

(a) Keyboard
(b) Mouse
(c) Monitor
(d) Printer

Q110. In the case of optical fiber transmission link, LED’s and LASER’s are used as _____

(a) Detectors
(b) Sources
(c) Repeaters
(d) Amplifiers

Q111. For Clamp circuit one must _____

(a) add DC signal with DC
(b) add AC signal with DC
(c) add AC signal with AC
(d) subtract AC from DC

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Q112. For which of the following functions can a Schmitt trigger be used?

(a) Pulse shaping
(b) Blocking
(c) Amplification
(d) Filtering

Q113. AND gate EXOR gate combination is ____

(a) both full and half adder.
(b) full adder
(c) half adder
(d) flip flop

Q114. In a PNP Transistor voltage divider biasing ____ resistors are used:

(a) one
(b) four
(c) three
(d) two

Q115. On which of the following frequencies does a Wi-Fi network work?

(a) 2.4 MHz
(b) 5 MHz
(c) 10 GHz
(d) 5 GHz

Q116. The heat sink of the BU205 transistor can be connected ____

(a) directly
(b) through a mica sheet
(c) directly and through the cap
(d) through the cap

Q117. Which of the following is a feature of a Darlington pair amplifier?

(a) Voltage gain is nil
(b) High input impedance and low voltage gain
(c) Low input impedance and low voltage gain
(d) high input impedance and high voltage gain

Q118. A unijunction transistor (UJT) is used to generate a ____ wave

(a) square
(b) sine
(c) saw tooth
(d) triangle

Q119. A Flip Flop is a oscillator.

(a) four stable
(b) bi-stable
(c) mono stable
(d) three stable.

Q120. What is the full form of MCB?

(a) Miniature circuit Broker
(b) Maximum Circuit Breaker
(c) Miniature Circuit Breaker
(d) Minimum Circuit Breaker

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Q121. What is the output of an LED driver?

(a) Chopped AC
(b) Pulsating DC
(c) DC
(d) AC

Q122. The BU205 transistor collector is the ____.

(a) right side pin.
(b) body of the transistor
(c) centre pin.
(d) left side pin.

Q123. The mail Merge function is present in:

(a) Microsoft Word
(b) Microsoft Excel and Microsoft Powerpoint
(c) Microsoft Excel
(d) Microsoft Powerpoint

Q124. In the context of mobile communication what is the full form of LTE?

(a) Long Term Evolution
(b) Last Time Evolution
(c) Least Time Evolution
(d) Long time Evolution

Q125. Sine Wave Peak to peak = ____

(a) RMS/ Square root of six
(b) RMS × Square root of three
(c) RMS / Square root of two
(d) RMS × Square root of eight

Q126. In an induction motor, stator is the

(a) rotary part
(b) part that is stationary
(c) part that controls the speed
(d) rotary and part that controls the speed

Q127. What can a CRO measure?

(a) Capacitance.
(b) resistance
(c) inductance
(d) frequency

Q128. LCD TV work on the principle of _____

(a) emission of cathode rays and light
(b) emission of cathode rays
(c) light emission
(d) light blockage

Q129. What is the beta current ratio of a transistor?

(a) I_C/I_B
(b) I_B/I_E
(c) I_E/I_C
(d) I_C/I_E

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Q130. IC 7812 is a _____ voltage regulator.

(a) 78 V
(b) 8 V
(c) 21 V
(d) 12 V

Q131. Impedance can be measured using which among the following instrument?

(a) LCR meter
(b) CRO
(c) DSO
(d) Function generator

Q132. Which of the following display interfaces can carry both, analog signals and digital signals?

(a) VGA
(b) HDMI
(c) Optical
(d) DVI

Q133. Which transistor configuration amplifier's current gain is lowest?

(a) Emitter coupled
(b) Common Emitter
(c) Common Collector
(d) Common base

Q134. ._____ technology is used in TV remotes.

(a) LCD
(b) Infrared lights
(c) Ultraviolet rays
(d) Ultraviolet rays and LCD

Q135. Which of the following is an Operational amplifier?

(a) IC 8085
(b) IC 7805
(c) IC 741
(d) IC 555

Q136. What happens to the Base emitter voltage of a transistor due to increase in temperature?

(a) Becomes 0
(b) decreases
(c) remains the same
(d) increases

Q137. Reverse biasing of a Zener diode _____

(a) conducts electricity
(b) does not conduct electricity
(c) amplifies electricity
(d) oscillates

Q138. In two stages, Transistor TC coupling _____

(a) creates isolation between the two stages
(b) blocks the AC between the two stages
(c) creates direct coupling between the two stages
(d) stops the AC and passes the DC

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Q139. With Class C amplifier, gain is _____compared to Class A amplifier.

(a) low
(b) equal
(c) high
(d) moderate

Q140. 10 cells are connected in parallel with the internal resistance of 1 Ω and 1.5 Volts. the total voltage and total resistance is _____

(a) 10 V and 1.5 Ω
(b) 1.5 V and 0.1 Ω
(c) 100 V and 50 Ω
(d) 1.8 V and 1.5 Ω

Q141. An amplifier with a positive feedback circuit causes ____

(a) bandwidth to stabilize
(b) gain of an amplifier to stabilize
(c) bandwidth to decrease
(d) bandwidth to increase

Q142. Cell phone communication is a ___.

(a) Full Simplex
(b) Full Duplex
(c) Simplex
(d) Half Duplex

Q143. Gama is the ratio of ____

(a) emitter current to base current
(b) collector current to emitter current
(c) collector current to base current
(d) base current to collector current

Q144. Hybrid parameter calculations are used in _____

(a) two-port linear network
(b) Push pull
(c) Class A amp
(d) Darlington pair

Q145. In case of silicon transistor the cutoff region voltage of base emitter is ____.

(a) 0.5
(b) 0.3
(c) 0.4
(d) > 0.7

Q146. IC 7805 is a ____ voltage regulator.

(a) 15 V
(b) 8 V
(c) 6 V
(d) 5 V

Q147. By combining two Class B amplifiers, we can build ____

(a) Push-pull amplifier
(b) LC coupling
(c) RC coupling
(d) TC coupling

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Q148. What is the forward voltage of LED?

(a) 0.6 Vdc
(b) 1.5 Vdc to 3 Vdc
(c) 0.3 Vdc
(d) 1.8 Vdc to 3.3 Vdc

Q149. Which of the following panels has the best viewing angle?

(a) LCD
(b) LED
(c) Plasma
(d) CRT

Q150. A center tap full rectifier consists of:

(a) one diode
(b) three diodes
(c) two diodes
(d) four diodes

Q151. Which of the following LED colours is NOT present in an LED TV panel?

(a) Green
(b) White
(c) Red
(d) Blue

Q152. Transformer Eddy current losses are created due to _____

(a) secondary winding
(b) copper
(c) core
(d) primary winding

Q153. The point intersection of DC and AC load line is knows as ____.

(a) Voltage gain.
(b) Operating point.
(c) Power gain.
(d) Current gain.

Q154. On the load line (with AC input in CE) which one of the following is NOT possible?

(a) cut-off point
(b) oscillation
(c) saturation point
(d) Q/operating point.

Q155. Formula for Number of Magnetic poles (P) in an Induction motor= ____

(a) (180 × f)/N
(b) (60 × f)/N
(c) (360 × f)/N
(d) (120 × f)/N

Q156. Find Current, if Resistance = 50 ohms and Power = 100 Watts

(a) 2 A
(b) 1.414 A
(c) 3 A
(d) 1.314 A

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Q157. Which of the following circuits is used to add a DC offset to waveform?

(a) Clamper
(b) Clipper
(c) Amplifier
(d) Rectifier

Q158. What colour LED lamp is commonly used for domestic use?

(a) White
(b) Black
(c) Red
(d) Green

Q159. If a regulator IC provides lower than input then the converter is known as ____.

(a) Boost
(b) Buffer
(c) Buck-Boost
(d) Buck

Q160. Why is an N-channel MOSFET preferred over a P-channel MOSFET?

(a) Because it allows fast switching
(b) Because it is TTL compatible.
(c) Because of its low input impedance.
(d) Because of the low noise.

Q161. _____ transistor/s are required for single stage amplification.

(a) 1
(b) 2
(c) 4
(d) 3

Q162. 8-bit registers consist of ___ Flip Flop.

(a) 4
(b) 12
(c) 16
(d) 8

Q163. Saw tooth wave can be generated through the ____

(a) Schmitt trigger
(b) Hartley oscillator
(c) Colpitts oscillator
(d) Crystal oscillator

Q164. Which material is used to prepare optical fiber as a transmission media?

(a) Glass and Plastic
(b) Copper
(c) Silver
(d) Aluminium.

Q165. RAM is a _____

(a) type of software
(b) CPU register
(c) temporary memory device
(d) permanent memory device.

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Q166. In Microsoft Excel we cannot calculate _____

(a) differentiation problems
(b) division problems
(c) arithmetic problems.
(d) multiplication problems

Q167. What is the use of an LED driver?

(a) It converts DC to AC
(b) It converts AC to DC
(c) It converts AC to AC
(d) It converts DC to DC

Q168. How are SMD components in bulk mounted on PCB?

(a) Using hot air blower
(b) Using soldering iron
(c) Using wave soldering machine
(d) Using soldering pot

Q169. What type of radiation is emitted from a remote control?

(a) Visible
(b) Ultaviolet
(c) Infrared
(d) Radio frequency

Q170. Window 10 is a/an ____

(a) type of computer
(b) operating and booting system
(c) booting system
(d) operating system.

Q171. A Capacitor function _____

(a) stops AC and passes DC
(b) stops DC and passes AC
(c) passes both, AC and DC
(d) stops both, AC and DC

Q172. In the ____ Storage Oscilloscope signals can be stored.

(a) Cathode ray tube (CRT).
(b) Digital Oscilloscope
(c) Analog Oscilloscope.
(d) VTVM

Q173. An RLC series resonance boosts:

(a) current
(b) resistance
(c) frequency
(d) inductance

Q174. Which of the following software is used for programming a micro controller?

(a) Microsoft Word
(b) Microsoft Paint
(c) Microsoft Excel
(d) Keil

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Q175. If a regulator IC provides a voltage higher than input, then the converter is knows as ___.

(a) Boost
(b) Buck
(c) Buffer
(d) Buck Boost

ANSWER KEY

1	a	2	a	3	a	4	a	5	a	6	a	7	a	8	a	9	a	10	a
11	a	12	a	13	a	14	a	15	a	16	a	17	a	18	a	19	a	20	a
21	a	22	a	23	a	24	a	25	a	26	a	27	a	28	a	29	a	30	a
31	a	32	a	33	a	34	a	35	a	36	a	37	a	38	a	39	a	40	a
41	a	42	a	43	a	44	a	45	a	46	a	47	a	48	a	49	a	50	a
51	a	52	a	53	a	54	a	55	a	56	a	57	a	58	a	59	a	60	a
61	a	62	a	63	a	64	a	65	a	66	a	67	a	68	a	69	a	70	a
71	a	72	a	73	a	74	a	75	a	76	a	77	a	78	a	79	a	80	a
81	a	82	a	83	a	84	a	85	a	86	a	87	a	88	a	89	a	90	a
91	a	92	a	93	a	94	a	95	a	96	a	97	a	98	a	99	a	100	a
101	a	102	a	103	a	104	a	105	a	106	a	107	a	108	a	109	a	110	a
111	a	112	a	113	a	114	a	115	a	116	a	117	a	118	a	119	a	120	a
121	a	122	a	123	a	124	a	125	a	126	a	127	a	128	a	129	a	130	a
131	a	132	a	133	a	134	a	135	a	136	a	137	a	138	a	139	a	140	a
141	a	142	a	143	a	144	a	145	a	146	a	147	a	148	a	149	a	150	a
151	a	152	a	153	a	154	a	155	a	156	a	157	a	158	a	159	a	160	a
161	a	162	a	163	a	164	a	165	a	166	a	167	a	168	a	169	a	170	a
171	a	172	a	173	a	174	a	175	a										

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