RRB ALP Mechanic Motor Vehicle 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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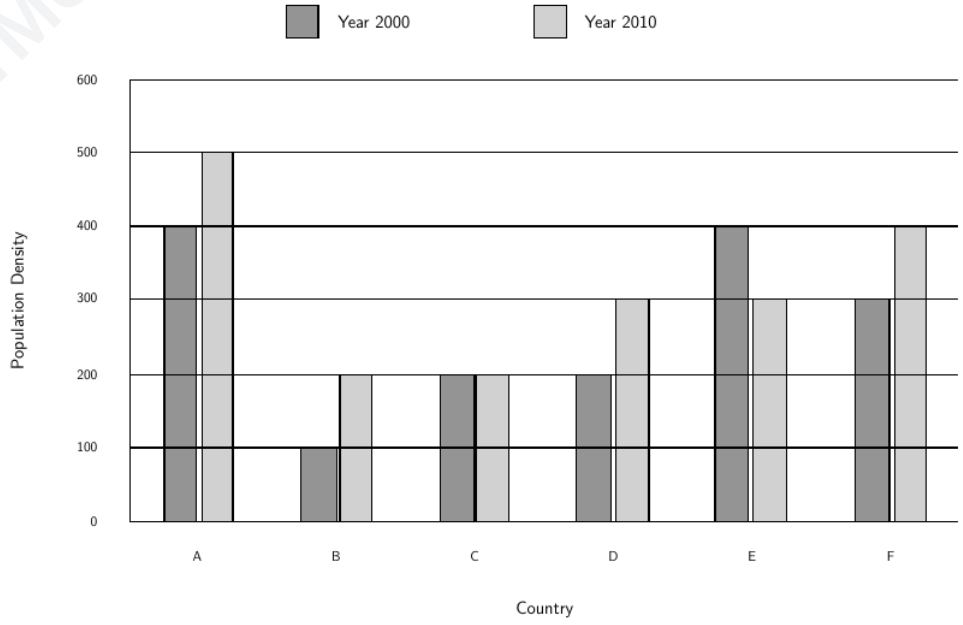
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PART A

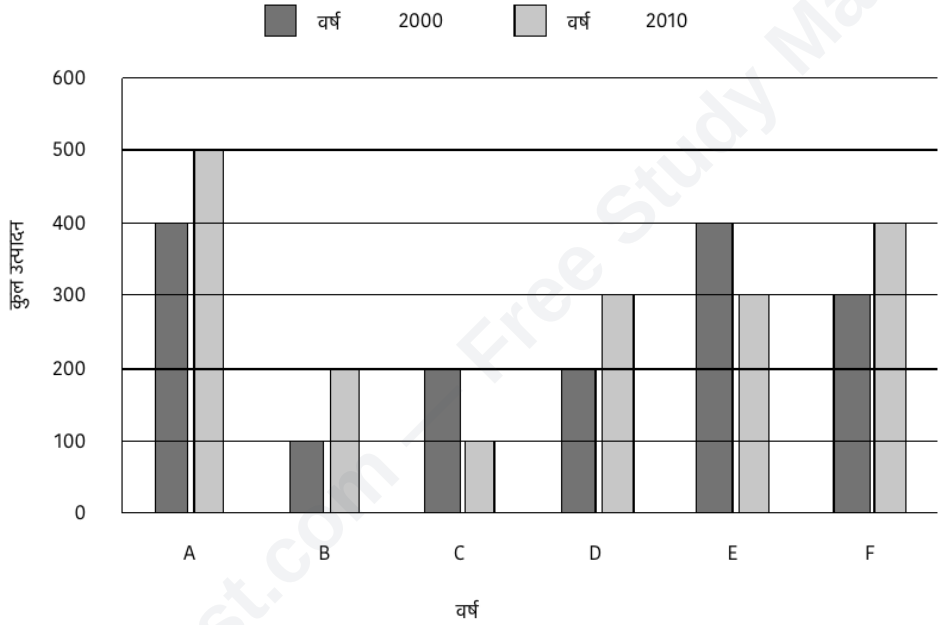
Q1. What is the diameter (in cm) of a sphere of surface area 1386 cm²?

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

Directions



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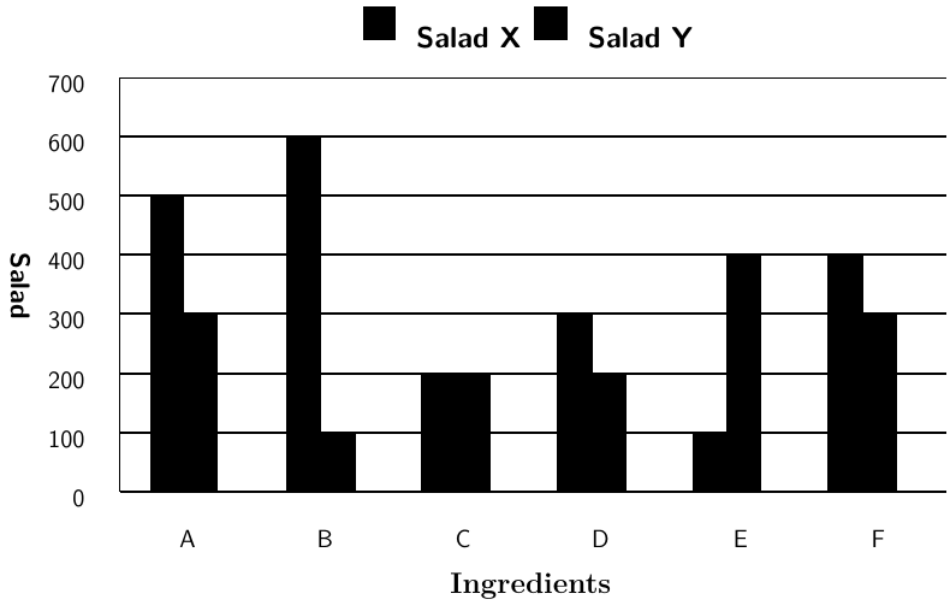


Q2. The bar graph shows the population density of 6 countries in 2000 and 2010.

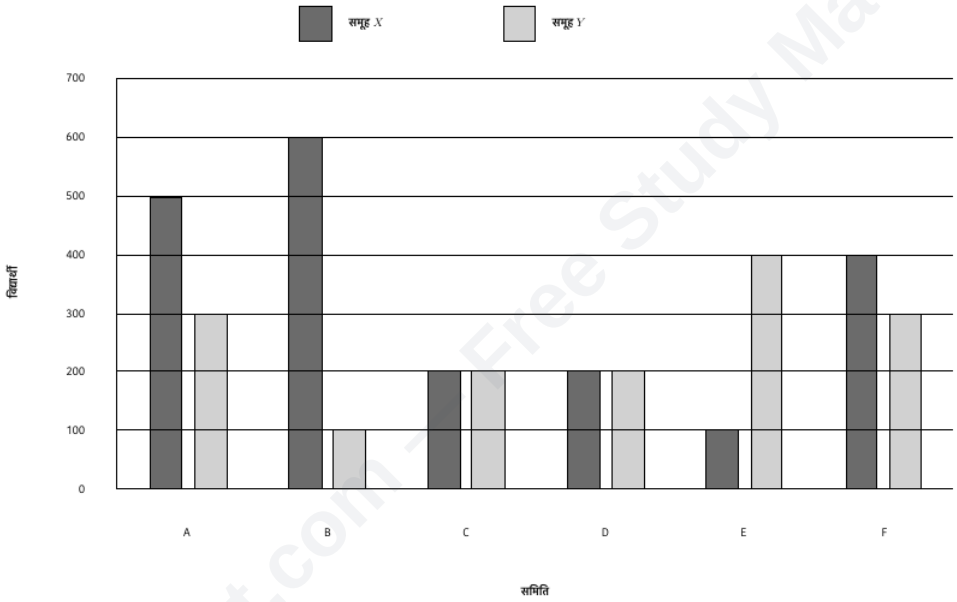
If the population of country B is 10 million in 2000 and the population of country D is 6 million in 2010, how much more is the area of country B than the area of country D, where population density is measured as the number of people per 100 square kilometers.

(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:

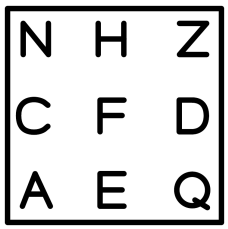
I. M Com final exam is a reasonable proof of an accountant's capability.

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)

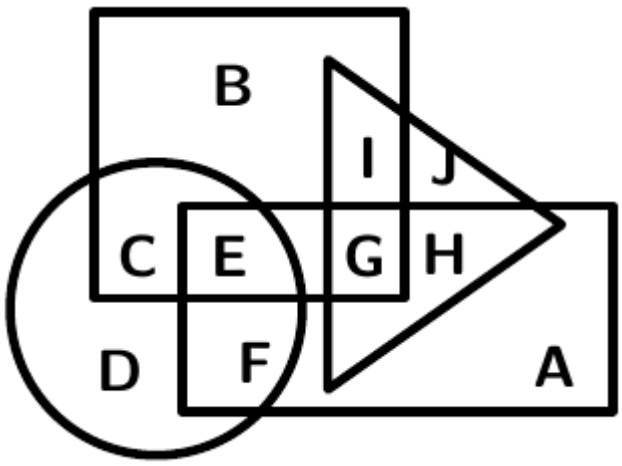
A	C	Q
Z	+ D =	E
N	F	H

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

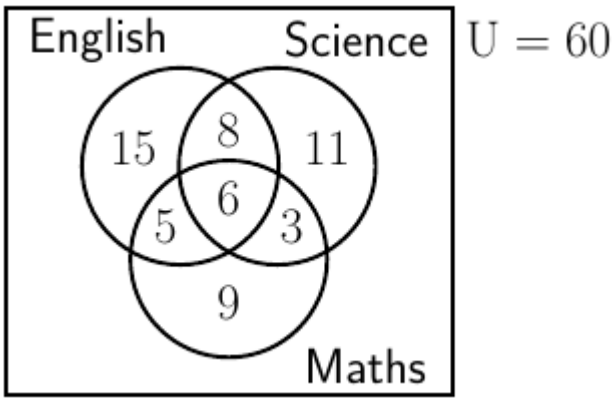
Q71. If A $ B means A is the husband of B, A # B means A is the brother of B and A * B means A is the mother of B, then what does P $ Q * R # S mean?

(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. What is the function of a sensor in the MPFI system?

(a) It senses the information in the form of physical and chemical variables.
(b) It does the mechanical work.
(c) It controls the pressure.
(d) It operates the injector.

Q102. Which of the following conductors is used in bulbs?

(a) Carbon
(b) Copper
(c) Tungsten

(d) Nichrome

Q103. In an overhead valve system, the cylinder head supports the_____.

(a) crankshaft
(b) oil pan
(c) oil pump
(d) rocker shaft assembly

Q104. The two commonly used semiconductor materials are:

(a) arsenic and boron
(b) aluminium and antimony
(c) gallium and indium
(d) germanium and silicon

Q105. Distributor-type FIP is also called:

(a) low-pressure pump
(b) rotary pump
(c) servo pump
(d) in-line pump

Q106. The function of an alternator in vehicles is to:

(a) discharge the battery
(b) measure the voltage
(c) measure the current
(d) charge the battery

Q107. Supercharging in marine engines is done to:

(a) decrease the engine power output
(b) decrease the fuel pressure
(c) increase the fuel pressure
(d) increase the engine power output

Q108. Which of the following is a common reason for using aluminium sheets?

(a) Lightness
(b) Dullness
(c) Brightness
(d) Darkness

Q109. Halon extinguishers are filled with:

(a) kerosene
(b) liquefied petroleum gas
(c) carbon tetrachloride
(d) water

Q110. Which types of rims are used generally in light vehicles?

(a) Split-type
(b) Wire spoke
(c) Press - type
(d) Artillery

Q111. What does NDT stand for?

(a) Non - Destructive Test
(b) Non - Dial Test
(c) Non - Driving Test
(d) Non - Dry Test

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Q112. The most common base material for ICs is:

(a) germanium
(b) silicon
(c) gallium
(d) carbon

Q113. A _____ is mounted on the rear end of a crankshaft.

(a) flywheel
(b) timing sprocket
(c) vibration damper
(d) counter weight

Q114. Connecting rods are made of:

(a) Aluminium
(b) mild steel
(c) alloy steel
(d) cast iron

Q115. The cylinder head is a single casting bolted on the top of the _____.

(a) Camshaft
(b) crankshaft
(c) oil sump
(d) cylinder block

Q116. The taper shank drills should be mounted on the machine spindles by means of a _____.

(a) Sleeve
(b) tang of file
(c) Hammer
(d) Punch

Q117. The choke in the carburettor is generally used when the engine is:

(a) running at high speed
(b) to be suddenly accelerated
(c) to be cold started
(d) Idling

Q118. In a Distributor less ignition system the distributor is replaced by:

(a) Brushes
(b) Insulated coils
(c) Ignition switch
(d) Rotor

Q119. The part that must be fitted in a piston to ensure a good seal with the cylinder wall is called:

(a) piston rings
(b) piston pins
(c) connecting rods
(d) Gaskets

Q120. In the differential, the crown wheel is attached to the _____.

(a) bevel pinion
(b) propeller shaft
(c) bevel gear
(d) differential cage

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Q121. Stoichiometric ratio is associated with:

(a) compression pressure
(b) mechanical efficiency
(c) air to fuel ratio
(d) volumetric efficiency

Q122. Which of the following type of steering gear box is most widely used in passenger cars?

(a) Recirculating ball type
(b) Worm and nut
(c) Rack and pinion
(d) Worm and wheel

Q123. What is determined while measuring a component?

(a) Nominal size
(b) Actual size
(c) Scale size
(d) Specified size

Q124. Piston pin connects piston and _____.

(a) connecting rod
(b) valve
(c) crankshaft
(d) camshaft

Q125. What is the function of hydraulic pumps in hydraulic systems?

(a) To permit the pressure in the reservoir to force fluid into the pump
(b) To develop pressure on the surface of oil
(c) To deliver fluid into the hydraulic system
(d) To produce flow only and not pressure

Q126. Which of the following is a temporary joint?

(a) Welded joint
(b) Soldered joint
(c) Press fit joint
(d) Riveted joint

Q127. A radiator core should be cleaned _____.

(a) from top to bottom of the core
(b) from top hose to bottom hose
(c) from the outside to the side of the fan
(d) by reverse flushing

Q128. Which of the following is the function of a flywheel?

(a) It drives the camshaft.
(b) It controls the crankshaft end play.
(c) It supports the timing gear.
(d) It serves as a mounting and frictional surface for clutch assembly.

Q129. A die is:

(a) an external thread cutting tool
(b) an acme thread cutting tool
(c) an internal thread cutting tool
(d) a square thread cutting tool

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Q130. The purpose of holding the hammer handle at its end is to:

(a) avoid injury to hand
(b) have maximum leverage
(c) avoid damage to workpiece
(d) get a proper grip

Q131. The colour of the negative plates of a lead acid battery is:

(a) Black
(b) White
(c) Brown
(d) Grey

Q132. The track rod is connected to the track arm by a_____.

(a) ball joint
(b) stub axle
(c) king pin
(d) universal joint

Q133. Theoretically, ignition in an engine should occur at:

(a) BDC at the start of the power stroke
(b) TDC at the end of the compression stroke
(c) TDC at the start of the compression stroke
(d) BDC at the end of the induction

Q134. The sensor which measures the outside air entering the engine:

(a) Mass air flow sensor (MAF)
(b) Throttle position sensor (TPS)
(c) Manifold Absolute pressure sensor (MAP)
(d) Oxygen sensor

Q135. Which fire extinguisher is suitable for live electrical fire?

(a) CO2
(b) Liquefied chemical
(c) Water filled
(d) Halon

Q136. Rotary motion of the steering wheel is converted into a reciprocating motion by the _____.

(a) track rod
(b) steering gear box
(c) stub axle
(d) track arm

Q137. Which component acts as the drive device in the automobile air conditioning system?

(a) Condenser
(b) Receiver
(c) Compressor
(d) Evaporator

Q138. A 12-V lead acid battery consists of:

(a) six cells in parallel
(b) three cells in series
(c) three cells in parallel
(d) six cells in series

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Q139. Which of the following is NOT a part of the MPFI system?

(a) Throttle position sensor
(b) Electronic fuel injector
(c) Carburettor
(d) Electrical fuel pump

Q140. The fuel injection timing in a distributor type injection system is controlled by: (Choose the correct option)

(a) changing the number of cams on the ring
(b) rotating the cam ring
(c) changing the plunger stroke
(d) changing the speed of the rotor

Q141. Spark plug of automobile consist of two electrodes one is ground electrode and the other is:

(a) Dielectric electrode
(b) Zero electrode
(c) Central electrode
(d) Right electrode

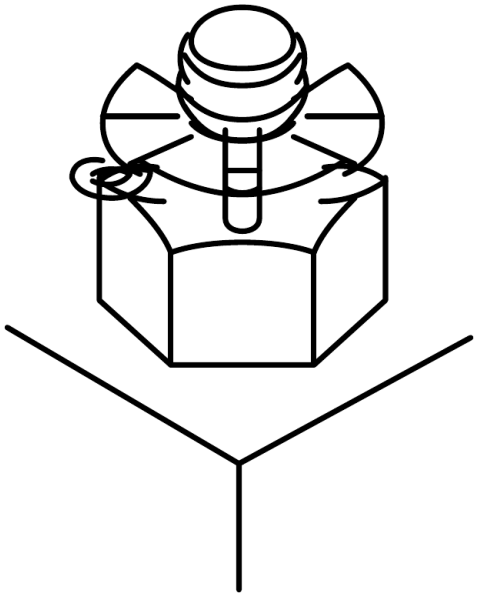
Q142. Taps are re-sharpened by grinding:

(a) diameter
(b) threads
(c) flutes
(d) relief

Q143. CRDI stands for:

(a) Common Regular Direct Interval
(b) Common Rack Direct Injection
(c) Common Rail Distributor Injector
(d) Common Rail Direct Injection

Q144. Identify the locking arrangement in the following figure.



(a) Wire fasteners
(b) Corrugated head screw
(c) Tab washers
(d) Castle nut with split pin

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Q145. The viscosity of a fluid offers resistance to:

(a) flow
(b) sound
(c) light
(d) current

Q146. What is the purpose of a fog light?

(a) To produce yellow light rays during mist/fog
(b) To read the working of gauges
(c) To produce interior illumination
(d) To indicate the vehicle is being parked.

Q147. The centre part of a typical universal joint is called the_____.

(a) Joint
(b) Bearing
(c) Spider
(d) Trunnion

Q148. The chisel will dig into the material when:

(a) the rake angle is more
(b) the angle of inclination is more
(c) the angle of inclination is too low
(d) the clearance angle is too low

Q149. Which type of lifting equipment is used in service stations for servicing of vehicles?

(a) Hydraulic jack
(b) Hydraulic press
(c) Hydraulic hoist
(d) Arbor press

Q150. Which type of fuel injection pump has a plunger and barrel assembly for each cylinder of the engine?

(a) Distributor pump
(b) Inline pump
(c) CRDI pump
(d) Feed pump

Q151. Gear box and differential together are enclosed in a box, which is called the _____.

(a) Multi-axle
(b) Transaxle
(c) Gear box
(d) Transfer case

Q152. Which of the following is required between the ring gear and the pinion gear to allow for heat expansion and lubrication?

(a) Shims
(b) Hole
(c) Pits
(d) Backlash

Q153. Maximum oil pressure in the lubrication system is controlled by the _____.

(a) pressure relief valve
(b) pressure switch
(c) oil filter
(d) pump rotor

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Q154. What controls the fuel metering and delivering in the MPFI system?

(a) Relay
(b) Fuse
(c) Fusible link
(d) Electronic control module

Q155. Pneumatic study deals with the study of systems operated with:

(a) water
(b) solid
(c) air
(d) oil

Q156. In distributor-less ignition systems, ignition can be adjusted manually by:

(a) It cannot be adjusted manually.
(b) adjusting screws
(c) centrifugal weights
(d) vacuum

Q157. In a multi-cylinder engine, which of the following arrangements is considered to be the simplest?

(a) V-engines
(b) Cylinders in-line
(c) Horizontally opposed type
(d) Radial

Q158. Which of the following does not require a coolant during reaming?

(a) Aluminium
(b) Copper
(c) Cast iron
(d) Steel

Q159. An alternator is generally fitted at _____ of the engine.

(a) rear side
(b) front side
(c) centre
(d) bottom side

Q160. Which of the following (gears) converts rotary motion into linear motion?

(a) Rack and pinion
(b) Herringbone gear
(c) Worm gear
(d) Helical gear

Q161. Which of the following is used to check the gap between contact breaker points?

(a) Micrometer gauge
(b) Wire gauge
(c) Vernier gauge
(d) Feeler gauge

Q162. A turbocharger is mounted on the _____.

(a) inlet manifold
(b) front of the engine block
(c) flywheel side
(d) exhaust manifold

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Q163. The exhaust manifold in small diesel engines is made of:

(a) Aluminium
(b) Copper
(c) Cast iron
(d) Brass

Q164. Which of the following is NOT a heat treatment process?

(a) Normalising
(b) Tempering
(c) Machining
(d) Annealing

Q165. Ammeter is connected to circuits in:

(a) series or parallel
(b) Open
(c) Parallel
(d) Series

Q166. A bent snip is used for:

(a) bending a sheet
(b) making holes on a sheet
(c) removing the burr
(d) cutting a sheet along a curved line

Q167. Which of the following is used to measure the ovality of a cylinder bore?

(a) Pressure gauge
(b) Height gauge
(c) Dial bore gauge
(d) Vacuum gauge

Q168. The taper shank drills are held on machines by means of:

(a) Chucks
(b) Vices
(c) Drifts
(d) Sleeves

Q169. In rear axle, what is used between the axle retainer plate and the housing to limit axle end play?

(a) Spring washers
(b) Shims
(c) Thrust washers
(d) Spring

Q170. Headlights are also used as:

(a) side indicators
(b) signalling devices
(c) stop indicators
(d) heating devices

Q171. In an automatic transmission system, on gear shifting, lever R indicates:

(a) Reverse
(b) Parking
(c) Forward
(d) Drive

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Q172. Which part of the piston is subjected to high pressure and temperature?

(a) Skirt
(b) Crown
(c) Ring section
(d) Lead

Q173. In diesel engines, fuel and air are mixed in the _____.

(a) inlet port
(b) combustion chamber
(c) carburettor
(d) injector

Q174. The opening and closing of the valve in relation to the piston movement is called:

(a) valve mechanism
(b) valve timing
(c) valve operation
(d) valve overlap

Q175. Which tool is used to remove and refit valves in a cylinder head?

(a) Valve bend remover
(b) Valve spring aligner
(c) Valve spring remover
(d) Spring tension tester

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
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131	a	132	a	133	a	134	a	135	a	136	a	137	a	138	a	139	a	140	a
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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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